

1 Results of WIFs using an assumed infiltration rate in the source area of 0.42 cm/yr for the three
2 postulated ILAW disposal locations, presented in Figure G.91, suggest that predicted groundwater
3 concentrations and calculated human health impacts would be a factor of about 3 higher and about 3.4
4 higher at the 1-km (0.6-mi) LOA down-gradient of the HSW disposal site locations (south of CWC and
5 near ERDF, respectively) relative to a comparable location down-gradient from the PUREX location.
6 These higher-predicted concentrations would be consistent with differences in hydrogeology at these two
7 locations relative to conditions found near the PUREX Plant. Near the PUREX Plant, the upper part of
8 the unconfined aquifer is largely composed of very permeable sediments associated with the Hanford
9 formation. Whereas, at the ERDF and CWC locations, the upper part of the unconfined aquifer is made
10 up of less permeable sand and gravel sediments associated with the Ringold sediments.

11
12 Results of WIF ratios at LOAs along the Columbia River resulting from releases at these two
13 alternative locations are also presented in Table G.40. The resulting WIF ratio suggests that peak
14 concentrations estimated along the Columbia River from these alternative locations of disposal would
15 have about a factor of 0.8 and 0.9 lower, respectively, than was calculated from releases near the PUREX
16 Plant. The reduction in concentration levels would be consistent with the longer flow path to the
17 Columbia River location.

18
19 **Table G.40.** Well Intercept Factors at Down-Gradient LOAs from the ILAW Disposal Facility Sited
20 near the PUREX Plant and Alternative Locations (South of the CWC under Alternative
21 Group A and near ERDF under Alternative Groups D₃, E₁, and E₂)

	Near PUREX	South of CWC	Near ERDF
1-km LOA			
WIF	5.1E-04	1.5E-03	1.8E-03
Ratio to WIF to WIF (near PUREX)	1.0	3.0	3.4
Columbia River LOA			
WIF	1.8E-04	1.4E-04	1.6E-04
Ratio to WIF to WIF (near PUREX)	1.0	0.8	0.9

23
24 **G.4 References**

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